

IN THE DRAWINGS

Please replace the original drawing with the attached 7 sheets of replacement drawings as required in the Office Action of September 22, 2005.

Attachment: Replacement Sheets

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claims 43-46 have been canceled. Allowed Claims 2, 7 and 12 have been rewritten in independent form. Claims 1, 6, and 11 have been amended to recite that the peak temperature of the loss tangent  $\tan\delta$  is in a range of  $-1^{\circ}\text{C}$  to  $-30^{\circ}\text{C}$ . Basis for this is evident from Figure 3 of the specification which illustrates the loss tangent  $\tan\delta$  peaking at a temperature of less than  $0^{\circ}\text{C}$ .

Applicants wish to thank Examiner Tran for the courtesy of an interview on November 14, 2005 at which time the amended claims were discussed. No agreement was reached at that time pending the Examiner's further consideration of the written response.

As was discussed during the interview, Fig. 3 is a graphical representation of a relation between temperature and the loss tangent  $\tan\delta$  of a cleaning blade in a cleaning unit. The loss tangent of the cleaning blade is a parameter of damping of energy due to an external force when the external force is exerted on the cleaning blade 8a and is expressed as a ratio of a loss elasticity modulus and a dynamic elasticity modulus. In particular, the loss elasticity modulus indicates viscous property and the dynamic elasticity modulus indicates elastic property.

If the loss tangent  $\tan\delta$  is small, the elastic property is dominant over the viscous property. For this reason, even when the external force is exerted, due to quick recovery of deformed shape of the cleaning blade, bending of the blade is suppressed. However, since the blade tends to vibrate easily, it results in resonance and chattering of the cleaning blade 8a. If the loss tangent  $\tan\delta$  is large the viscous property is dominant over the elastic property. For this reason, the scraping of the photosensitive drum 1 is improved and the vibrations in the cleaning blade are suppressed effectively. The resonating of the cleaning blade at high

temperature and chattering of the cleaning blade at low temperature are minimized, thereby achieving good cleaning of the blade.

However, it is difficult to fulfill both the properties simultaneously. The temperature peak of  $\tan\delta$  was conventionally kept near room temperature. However, Applicants have discovered that if the peak value of  $\tan\delta$  kept at a low temperature, the cleaning blade 8a may have both elastic and viscous properties and can be used in the practical environmental conditions of an image forming apparatus 100.

Claims 1, 3, 6, 8, 11 and 13 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. patent 6,128,462 (Kato et al) which discloses that the peak temperature of the loss tangent  $\tan\delta$  should be 0°C or higher. As discussed during the interview, on the other hand, the claims now recite that the peak temperature of the loss tangent  $\tan\delta$  is in a range of -1°C to -30°C. Accordingly, Kato et al no longer anticipates the claimed range.

Nor would the claimed range have been obvious from Kato et al. As already explained, Figure 3 illustrates that the loss tangent  $\tan\delta$  of the cleaning blade is not kept near room temperature, as had conventionally been done, but instead is kept at a low temperature in order to provide both elastic and viscous properties to some extent in the practical environmental conditions of an image forming apparatus. Kato et al provides no evidence of the desirability of adjusting the peak temperature of the loss tangent to a very low temperature but instead teaches that the loss tangent “peak temperature may preferably by 0°C or higher *because if it is below 0 °C, hardness tends to become too high*” (column 6, lines 30-32). Thus, Kato et al *explicitly teaches against* the claimed subject matter and so one skilled in the art would not have found it obvious to provide a peak temperature of the loss tangent which is in a range lower than 0°C. The amended claims therefore clearly define over this reference.

The rejections of paragraphs 5 and 15 are believed to be moot in view of the cancellation of Claims 43-45.

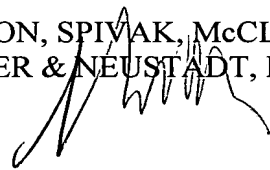
Concerning the rejections of paragraphs 8-14, the secondary references to Ri et al, Shigemori et al, Takami et al, Oishi et al, Kojima et al, Yamashita et al and Godlove were cited to teach features of the dependent claims and provide no teaching contrary to the explicit teaching of Kato et al. i.e., that the loss tangent peak temperature should be 0°C or greater. Accordingly, the amended claims are believed to define over any combination of the above references.

The claims have been amended in light of the claim objection of paragraph 2, which is believed to be moot. Additionally, new formal drawings in accordance with paragraph 1 are being submitted herewith.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



Customer Number

**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 06/04)

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Gregory J. Maier  
Registration No. 25,599  
Robert T. Pous  
Registration No. 29,099  
Attorneys of Record